

WHAT IS CLAIMED IS:

1. An image reading device operable in a manually placed document reading mode offered by a manually placed document reading means and an ADF document reading mode offered by an ADF document reading means,
5 comprising:

10 reading mode detecting means which detects in which mode of the manually placed document reading mode and the ADF document reading mode a document to be read is in;

15 first reading-speed setting means which sets a reading speed of the ADF document reading means to a predetermined reading speed, upon detection by the reading mode detecting means that the document to be read is in the ADF document reading mode; and

20 second reading-speed setting means which sets a reading speed of the manually placed document reading means to a predetermined reading speed sufficient to reduce image vibration in a result of reading by the manually placed document reading means, upon detection by the reading mode detecting means that the document to be read is in the manually placed document reading mode.

25 2. An image reading device according to claim 1, wherein the second reading-speed setting means sets, as a moving speed of a scanning carriage utilized in the manually placed document reading means, a speed

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5 sufficient to reduce residual vibration in the scanning carriage, in order to set the reading speed for the manually placed document reading means to a speed sufficient for the reduction of image vibration as a result of the reading by the manually placed document 10 reading means.

10 3. An image reading device according to claim 1, wherein the second reading-speed setting means sets to a speed sufficient to reduce image vibration caused by the reading by the manually placed document reading means and sufficient to guarantee a printing operation of a printer main body for simultaneous printing at a predetermined speed, of the result of the reading by the manually placed document reading means.

15 4. An image reading device according to claim 1, wherein the second reading-speed setting means sets, as a moving speed of a scanning carriage utilized in the manually placed document reading means, a speed sufficient to reduce residual vibration in the scanning carriage, in order to set the reading speed of the manually placed document reading means to a speed sufficient for the reduction of image vibration caused by the reading by the manually placed document reading means and sufficient to guarantee a printing operation of a printer main body for simultaneous printing at a predetermined speed, of the result of the reading by the manually placed document reading means.

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5. An image reading method operable in a manually placed document reading mode offered by a manually placed document reading means and an ADF document reading mode offered by an ADF document reading means, comprising:

detecting which mode of the manually placed document reading mode and the ADF document reading mode a document to be read is in;

10 setting a reading speed for the ADF document reading means to a predetermined reading speed, upon detection that the document to be read is in the ADF document reading mode; and

15 setting a reading speed for the manually placed document reading means to a predetermined reading speed sufficient to reduce image vibration as a result of the reading by the manually placed document reading means, upon detection that the document to be read is in the manually placed document reading mode.

6. An image reading device operable in a manually placed document reading mode offered by a manually placed document reading means and an ADF document reading mode offered by an ADF document reading means, comprising:

25 reading mode detecting means which detects in which mode of the manually placed document reading mode and the ADF document reading mode a document to be read is in;

first reading-speed setting means which sets a reading speed for the ADF document reading means to a predetermined reading speed, upon detection by the reading mode detecting means that the document to be read is in the ADF document reading mode; and

5 second reading-speed setting means which sets a reading speed for the manually placed document reading means to a speed slower than the reading speed for the ADF document reading means, upon detection by the reading mode detecting means that the document to be read is in the manually placed document reading mode.

10 7. An image reading device according to claim 6, wherein the second reading-speed setting means sets, as a moving speed of a scanning carriage utilized in the manually placed document reading means, a speed sufficient to reduce residual vibration in the scanning carriage, in order to reduce the reading speed for the manually placed document reading means to the speed slower than the reading speed for the ADF document reading means sufficient to reduce image vibration in a result of reading by the manually placed document reading means.

15 8. An image reading device according to claim 6, wherein the second reading-speed setting means reduces the reading speed of the manually placed document reading means to a speed slower than the reading speed of the ADF document reading means sufficient to reduce

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image vibration as a result of reading by the manually placed document reading means and sufficient to guarantee a printing operation of a printer main body for simultaneous printing at a predetermined speed, as 5 a result of reading by the manually placed document reading means.

9. An image reading device according to claim 6, wherein the second reading-speed setting means sets, as 10 a moving speed of a scanning carriage utilized in the manually placed document reading means, a speed sufficient to reduce residual vibration in the scanning carriage, in order to reduce the reading speed of the manually placed document reading means to a speed 15 slower than the reading speed of the ADF document reading means sufficient to reduce image vibration as a result of reading by the manually placed document reading means and sufficient to guarantee a printing operation of a printer main body for simultaneous printing at a predetermined speed, of a result of 20 reading by the manually placed document reading means.

10. An image reading method operable in a manually placed document reading mode offered by a manually placed document reading means and an ADF document reading mode offered by an ADF document reading means, 25 comprising:

detecting which mode of the manually placed document reading mode and the ADF document reading mode

a document to be read is in;

setting a reading speed for the ADF document reading means to a predetermined reading speed upon detection that the document to be read is in the ADF document reading mode; and

setting a reading speed for the manually placed document reading means to a reading speed slower than the reading speed for the ADF document reading means, upon detection that the document to be read is in the manually placed document reading mode.

11. An image reading device operable in a manually placed document reading mode offered by a manually placed document reading means and an ADF document reading mode offered by an ADF document reading means, comprising:

reading mode detecting means which detects in which mode of the manually placed document reading mode and the ADF document reading mode a document to be read is in; and

20 reading speed changing means which switches between a reading speed for the manually placed document reading means set upon the detection by the reading mode detecting means that the document to be read is in the manually placed document reading mode and a reading speed for the ADF document reading means set upon the detection that the document to be read is in the ADF document reading mode.

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12. An image reading device according to claim 11,
wherein the second reading-speed setting means sets, as
a moving speed of a scanning carriage utilized in the
manually placed document reading means, a speed
5 sufficient to reduce residual vibration in the scanning
carriage, in order to change from the reading speed of
the ADF document reading means to the reading speed of
the manually placed document reading means sufficient
to reduce image vibration as a result of reading by the
manually placed document reading means.

10 13. An image reading device according to claim 11,
wherein the second reading-speed setting means changes
the reading speed of the manually placed document
reading means from the reading speed of the ADF
15 document reading means, to a speed sufficient to reduce
image vibration as a result of reading by the manually
placed document reading means and sufficient to
guarantee a printing operation of a printer main body
for simultaneous printing at a predetermined speed, of
20 the result of the reading by the manually placed
document reading means.

14. An image reading device according to claim 11,
wherein the second reading-speed setting means sets, as
a moving speed of a scanning carriage utilized in the
25 manually placed document reading means, a speed
sufficient to reduce residual vibration in the scanning
carriage, in order to change the reading speed of the

manually placed document reading means from the reading speed of the ADF document reading means to a speed sufficient to reduce image vibration in a result of reading by the manually placed document reading means and sufficient to guarantee a printing operation of a printer main body for simultaneous printing at a predetermined speed, of the result of the reading by the manually placed document reading means.

15. An image reading method operable in a manually
10 placed document reading mode offered by a manually
placed document reading means and an ADF document
reading mode offered by an ADF document reading means,
comprising:

detecting which mode of the manually placed
15 document reading mode and the ADF document reading mode
a document to be read is in; and

20 changing between a reading speed of the manually placed document reading means set upon the detection by the reading mode detecting means that the document to be read is in the manually placed document reading mode and a reading speed of the ADF document reading means set upon the detection that the document to be read is in the ADF document reading mode.

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